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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,970	06/07/2006	Nicolas Massoni	292118US2PCT	7263
22850 7590 02/01/2008 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
			EXAMINER KIM, KIH0	
			ART UNIT 2884	PAPER NUMBER
			NOTIFICATION DATE 02/01/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/581,970

Applicant(s)

MASSONI ET AL.

Examiner

KIHO KIM

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2884

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 38-74 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 38-74 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9/26/06 amd9/28/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities:
- a. Delete "Figure 9." on p. 35.
 - b. "illustrated figures 7A and 7B" (on line 26 of p. 20) should be "illustrated in figures 7A and 7B".
- Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who

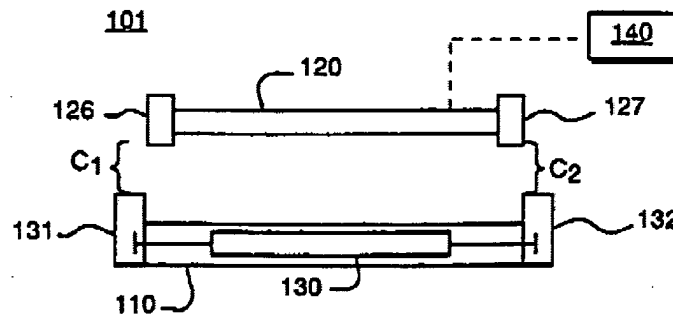
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has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 38 - 65 and 67 - 74 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Reed et al. (US 2003/0141453 A1, hereunder Reed.)

Regarding independent claim 38:



Reed teaches a device (Fig. 4B above imported from Reed) for measuring radiant energy comprising:

a carrier (120 in Fig. 4B; in paragraph [0054]) including first means allowing absorption of radiant energy, and second means enabling provision of one or more electric signals in relation to the absorbed radiant energy (IR energy sensor membrane 120 in Fig. 4B; on line 9 in paragraph [0054]); and

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a substrate (110 in Fig. 4B; on line 3 in paragraph [0054]) including reading means (130) for reading the electric signals, the carrier being mobile (by levitation mechanism 140 in Fig. 4B; on line 10 in paragraph [0054]) relative to the substrate.

Regarding dependent claim 39, Reed teaches a device for measuring radiant energy, the reading means being fixed (in the substrate; see Fig. 9).

Regarding dependent claim 40, Reeds teaches a device for measuring radiant energy, the reading means (126 and 127 on line 7 in paragraph [0064]; since contact 126 and 127 are part of the reading means) being mobile.

Regarding dependent claim 41, Reed teaches a device for measuring radiant energy, the first means (120) and the reading means (126 and 127) being mobile.

Regarding dependent claim 42, Reed teaches a device for measuring radiant energy, configured to take up a position in which the second means is not electrically (absorption period on line 9 in paragraph [0057] which is carried out in levitated state) connected to the reading means.

Regarding dependent claim 43, as illustrated in Fig. 4A Reed teaches a device for measuring radiant energy, configured to take up a position in which the substrate and the carrier are connected or attached solely by insulating zones belonging to the carrier or/and the substrate.

Regarding dependent claim 44, as illustrated in Fig. 4B Reed teaches a device for measuring radiant energy according to claim 38, configured to take up a position in which the carrier is neither attached to nor in contact with the substrate.

Regarding dependent claim 45, as illustrated in Fig. 4B by using a levitating mechanism 140 as discussed above Reed teaches a device for measuring radiant energy, configured to take up a position in which the carrier is in levitation with respect to the substrate.

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Regarding dependent claim 46, as illustrated in Fig. 4A and as described in paragraph [0057] for post-absorption readouts Reed teaches a device for measuring radiant energy according to claim 42, the position being a position in which the device is configured to take a measurement.

Regarding dependent claim 47, since Reed detects IR energy using 101, Reed teaches a device for measuring radiant energy, the position being a position in which the first means is configured to heat.

Regarding dependent claim 48, as illustrated in Fig. 4A Reed teaches a device for measuring radiant energy, configured to take up at least one other position in which the second means is electrically connected to the reading means.

Regarding dependent claim 49, as illustrated in Fig. 4A, Reed teaches a device for measuring radiant energy, configured to take up at least one other position in which conductor zones of the carrier are in contact with other conductor zones of the substrate.

Regarding dependent claim 50, as illustrated in Fig. 4A Reed teaches a device for measuring radiant energy according to claim 42, configured to take up at least one other position in which conductor zones of the carrier are in contact with the reading means of the substrate.

Regarding dependent claim 51, as illustrated in Fig. 4A Reed teaches a device for measuring radiant energy according to claim 48, the other position being a position in which the reading means is configured to acquire the electric signals.

Regarding dependent claim 52, as disclosed on line 10 in paragraph [0057] Reed teaches a device for measuring radiant energy, the other position being a position in which the first means is configured to cool (quenching period).

Regarding dependent claim 53, as illustrated in Fig. 4A Reed teaches a device for measuring

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radiant energy according to claim 38, the substrate and the carrier being mechanically attached or linked.

Regarding dependent claim 54, Reed teaches a device for measuring radiant energy, the carrier being attached to the substrate by suspending means (241 and 242 in Fig. 5A disclosed on line 4 in paragraph [0062]).

Regarding dependent claim 55, as illustrated in Fig. 5A and Fig. 5B, 241 and 242 are flexible. Thus, Reed teaches a device for measuring radiant energy according to claim 54, the suspending means being flexible.

Regarding dependent claim 56, Reed teaches a device for measuring radiant, the suspending means being in a thermal insulating (non-conductive for thermal isolation in lines 7 - 8 in paragraph [0058]) material.

Regarding dependent claim 57, as illustrated Fig. 4A, Reed teaches a device for measuring radiant energy, the substrate and the carrier being mechanically independent.

Regarding dependent claim 58, Reed teaches a device for measuring radiant energy, further comprising: actuating means (140 as discussed above) for enabling displacement of the first means with respect to the reading means.

Regarding dependent claim 59, as illustrated in Fig. 4B, 140 levitates 120. Therefore, Reed teaches a device for measuring radiant energy, the actuating means enabling displacement of the carrier.

Regarding dependent claim 60, Reed teaches a device for measuring radiant energy, the actuating means enabling displacement of the reading means (since 126 and 127 being part of 120 levitating is also part of the reading means).

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Regarding dependent claim 61, Reed teaches a device for measuring radiant energy, the actuating means being at least partly thermomechanical, or piezoelectric, or electromagnetic, or electrostatic (on lines 2 - 5 in paragraph [0011]).

Regarding dependent claim 62, as illustrated in Figs. 4A – 4B and 5A - 5B Reed teaches a device for measuring radiant energy, the actuating means including one or more electrodes (126 and 127) belonging to the carrier or/and one or more electrodes belonging to the substrate.

Regarding dependent claim 63, Reed discloses a means for levitation including electromagnetic fields and various dynamic electromagnetic forces in paragraph [0011].

Therefore, Reed anticipates a device for measuring radiant energy, wherein the actuating means is piezoelectric, the reading means being configured to lengthen to enter into contact with the carrier.

Regarding dependent claim 64, Reed teaches a device for measuring radiant energy, the reading means being formed of one or more conductor pads(126, 127, 131, and 132).

Regarding dependent claim 65, as illustrated in Fig. 9 Reed teaches a device for measuring radiant energy, the substrate including one or more circuits for processing the electric signals.

Regarding dependent claim 67, Reed teaches a device for measuring radiant energy, the first means being formed of at least one absorbing layer (IR sensitive film 121 on line 16 in paragraph [0067])of electromagnetic radiation.

Regarding dependent claim 68, Reed teaches a device for measuring radiant energy, the second means being formed of at least one semi-conductive (on lines 16 – 22 in paragraph [0067]) or metal layer.

Regarding dependent claim 69, Reed teaches in paragraph [0067] that a device for measuring

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radiant energy, wherein the second means is formed of at least one semi-conductive layer, the semi-conductive layer adjoining or being integrated in the first means (infrared sensitive film 121).

Regarding dependent claim 70, Reed anticipates a device for measuring radiant energy according to claim 38, the second means including one or more thermistors (micro-bolometer sensor in paragraph [0018]).

Regarding dependent claim 71, Reed teaches a device for measuring radiant energy, the substrate further including a layer enabling reflection (reflective layer 117 on line 12 in paragraph [0064]) of the electromagnetic rays.

Regarding dependent claim 72, Reed teaches a device for measuring radiant energy, the substrate being a semiconductor (substrate wafer in paragraph [0094]).

Regarding dependent claim 73, Reed teaches a device for measuring radiant energy, the device for measuring radiant energy being made in thin layers (thin film 121 as discussed above).

Regarding dependent claim 74, Reed anticipates A MEMS (in paragraph [0012]) comprising the device according to claim 38.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claim 66 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reed as applied to claim 38 above, and further in view of Belcher *et al.* (US 5,436,450. Hereunder Belcher.)

Regarding dependent claim 66:

The teaching of Reed has been discussed above.

Reed fails to teach a device for measuring radiant energy, the substrate including one or more circuits enabling polarization of the second means.

Belcher teaches a circuit to insure polarization associated with each thermal sensor in Col. 6, lines 35 – 46.

It would have been obvious to a person having ordinary skill in the art at the time of the claimed invention was made to modify the infrared sensor of Reed with a circuit to ensure polarization associated with each thermal sensor in order to consider the temperature change varied by the electrical polarization.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sher *et al.* teaches a thermal detector.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KIM KIM whose telephone number is (571)270-1628. The examiner can normally be reached on Monday - Friday 8:00 a.m. - 5:00 p.m. EST.

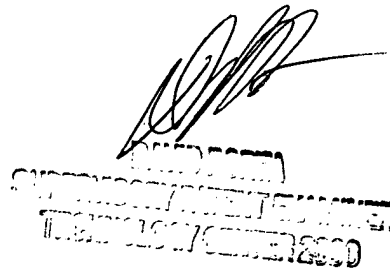
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571)272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. K./

Examiner, Art Unit 2884



Handwritten signature of the examiner, K. K., is positioned above a rectangular official stamp. The stamp contains the text "EXAMINER", "UNIT 2884", and "ART UNIT 2884".